11/21/13 Agenda

- Remediation Packet for Unit 4 is on my website, if you want to retake the Unit 4 test, I need it in my hands the Monday we get back from Thanksgiving break.

- Warm Up

- Review HW - Worksheet 4
  - Angle Bisectors

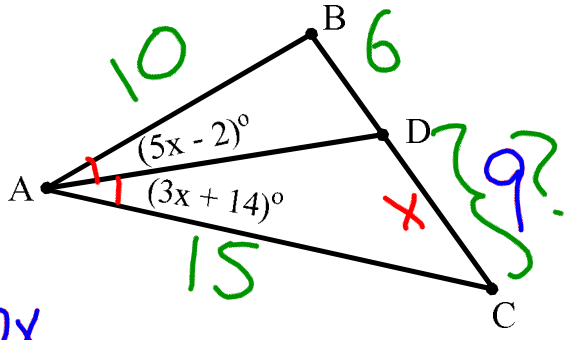
- Quiz Review - Sections 5.1-5.4

- Start Classwork/Homework
  - Worksheet 5 - Review Worksheet

Warm Up

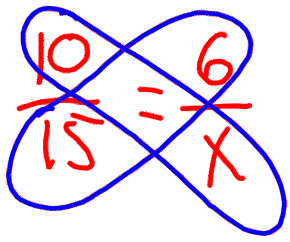
AD bisects angle BAC.

Find the value of x:



If AB = 10, AC = 15, and BD = 6,

Find the value of DC:



$6 \cdot 15 = 10x$

$90 = 10x$

$9 = x$

$5x - 2 = 3x + 14$

$-3x \quad -3x$

$2x - 2 = 14$

$+2 \quad +2$

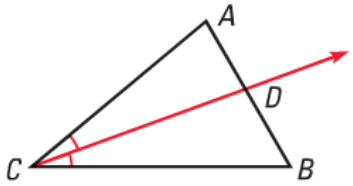
$2x = 16$

$x = 8$

THEOREM 6.7

If a ray bisects an angle of a triangle, then it divides the opposite side into segments whose lengths are proportional to the lengths of the other two sides.

Proof: Ex. 27, p. 403

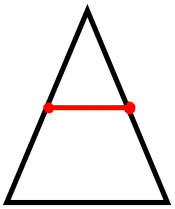


$\frac{AD}{DB} = \frac{CA}{CB}$

Review - Sections 5.1-5.4

5.1:

Midsegment: CONNECTS MIDPOINTS OF 2 SIDES OF A △



Properties of a midsegment:

1. $\frac{1}{2}$ THE LENGTH OF THE 3RD SIDE
2. $\parallel$ TO 3RD SIDE

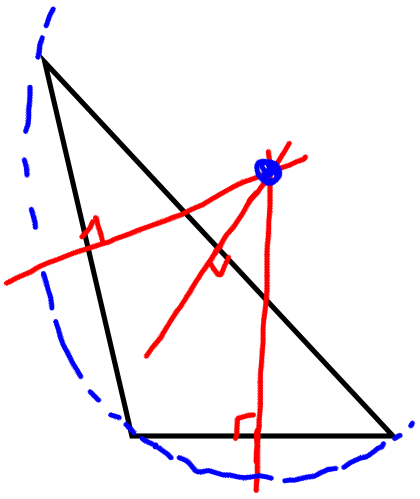
5.2:

Perpendicular Bisectors - properties:

1. $\perp$ TO THE SEGMENT
2. SPLITS THE SEGMENT INTO 2 $\cong$ SEGMENTS

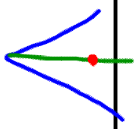
Perpendicular Bisectors intersect at the CIRCUMCENTER

Properties: EQUIDISTANT FROM THE VERTICES



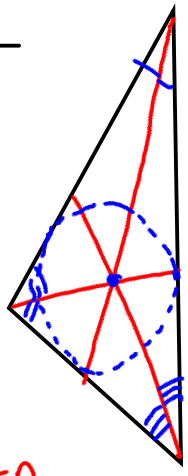
Review - Sections 5.1-5.4

5.3: Angle Bisector: SPLIT ∠ INTO 2 ≅ ∠s



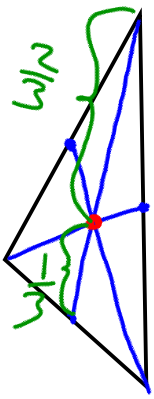
Properties of a bisector:

1. POINT ON BISECTOR EQUIDISTANT FROM SIDES OF ∠
2. IF POINT IS EQUIDISTANT FROM
3. SIDES, IT'S ON BISECTOR



Angle Bisectors intersect at the INCENTER

Properties: EQUIDISTANT FROM SIDES OF △



5.4: Median: CONNECTS VETEX TO MIDPOINT OF OPPOSITE SIDE

Medians intersect at the CENTROID

Properties: CENTROID SPLITS MEDIAN INTO 2 SEGMENT

VERTEX – CENTROID = $\frac{2}{3}$ MEDIAN

CENTROID - SIDE = $\frac{1}{3}$ MEDIAN

Altitude: "HEIGHT" OF △ VERTEX ⊥ TO OPPOSITE SIDE

Altitudes intersect at the ORTHOCENTER